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**EXPEDITION OF THE CALIFORNIA ACADEMY
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CALIFORNIA IN 1921¹**

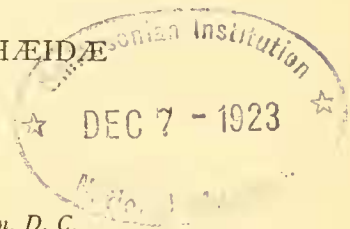
ANTHOMYIDÆ AND LONCHÆIDÆ

(Kelp Flies and their allies)

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In the material submitted for identification there are several new and interesting species. The new species are fully described herein and notes presented on the others.

Family ANTHOMYIDÆ

1. *Melanochelia immaculiventris* Malloch, new species

Male and female: Black, densely pale gray pruinose; head in male with pale gray pruinescence on interfrontalia and yellow on orbits, face and cheeks; in female with whitish pruinescence on all parts; thorax with three very faint linear brownish vittæ; abdomen entirely pale gray pruinose, or with a pale, almost indistinguishable central linear vitta and a yellowish tinge on each side of each tergite; legs black, gray pruinose, tibiæ tawny; wings whitish; calyptreæ white; halteres yellowish.

Eyes bare, separated by more than one-third of the head width; orbits narrow, with an inner series of bristles all of which except the upper one are incurved, and an outer series of setulose hairs; parafacial about as wide as third antennal segment and as wide as half the height of cheek; third antennal segment about twice as long as second, not extending to mouth; arista swollen on its basal half, with very short pubescence. Abdomen in male narrowly ovate, subdepressed, fifth sternite with

¹A map showing all the islands, etc., visited by this Expedition will be found in Vol. XII, No. 6, of these Proceedings, copies of which can be supplied at nominal cost.

a broad shallow notch; hypopygium small; in female more broadly ovate, apical tergite with a medium transverse series of strong bristles, the apical margin unarmed. Fore tibia without a median bristle; mid femur with a posteroventral series of closely placed short bristles which are stronger in the male; mid tibia with two posterior bristles; hind femur with a sparse series of bristles on basal half of posteroventral surface and a similar but complete series on anteroventral; hind tibia with one anteroventral, two anterodorsal and one posterodorsal bristle, the last near base. Costal thorn minute.

Type: Male, No. 1317, Mus. Calif. Acad. Sci., taken June 10, 1921, by E. P. Van Duzee, on **San José Island, Gulf of California**, and *allotype*, female, No. 1318, Mus. Calif. Acad. Sci., taken April 25, 1921, at Tepoca Bay, Sonora, Mexico. *Paratype*, one male, taken May 30, 1921, on San Francisco Island, Gulf of Mexico.

This species is an aberrant one and might be placed in *Phyllogaster* but for the structure of the fifth sternite in the male.

Two other species belonging to this group are in the collection but as both are represented by one female each I cannot definitely identify them.

2. *Phyllogaster longispina* Malloch, new species

Male and female: Black, slightly shining, densely gray pruinose; head black, densely white pruinose; thorax not vittate; abdomen with faint brownish marks consisting of a dorsocentral interrupted vitta except on basal segment, and two pairs of round spots, one on second and the other on third tergite; legs black, knees narrowly reddish; wings hyaline; calyptæ white, halteres yellow.

Frons a little over one-third of the head width, with four or five bristles on each orbit, the upper one curved laterad as in last species, and with numerous setulose hairs between the bristles and eyes; parafacial a little wider at base of antennæ than width of third antennal segment, narrowed below; cheek distinctly higher than widest part of parafacial; antennæ extending two-thirds of distance to mouth, third segment narrow, fully twice as long as second; arista as long as antennæ, densely short haired, the longest hairs about twice as long as its basal diameter. Thorax with three pairs of dorsocentrals behind suture; presutural acrostichals weak; sternopleurals 1:2. Abdomen of male cylindrical, tapered posteriorly, segments subequal, one or two long bristles on sides of each tergite, and a transverse series at middle of fourth tergite; hypopygium small; fifth sternite largely concealed, the processes not very broad nor conspicuously bristled. Abdomen of female broader than in male; armed similarly, but the apical transverse series of bristles on fourth tergite is very weak and there are four curved spines on genital segment, one strong pair with a weaker pair vertically between them. Fore tibia unarmed at middle; mid femur with three or four long bristles on basal half of posteroventral

surface; mid tibia with two posterior bristles; hind femur with an irregular series of anteroventral bristles and three or four long widely spaced bristles on basal half of posteroventral surface; hind tibia with one antero-ventral, two anterodorsal, and two posterodorsal bristles, and some long anterodorsal setulæ, the bristles at middle of tibia and also the pre-apical anterodorsal and posterodorsal bristles very long. First posterior cell not narrowed apically.

Length, 5-6 mm.

Type: Male, No. 1319, *allotype*, female, No. 1320, Mus. Calif. Acad. Sci., and seven *paratypes*, taken April 29, 1921, by E. P. Van Duzee, at **Gonzales Bay, Lower California**.

3. *Fucellia maritima pacifica* Malloch, new subspecies

Aldrich had no records of this species from the Pacific but I have seen many examples from this coast, amongst them being a large series in the present collection. I can detect no differences between these and specimens from the Atlantic coast except that they are on the average larger, paler in color, and have the apices of femora and apex of fourth tergite in both sexes rufous. For this variety I propose the above name.

Length, 5.5-6 mm.

Type: Male, No. 1321, and *allotype*, female, No. 1322, Mus. Calif. Acad. Sci., taken by E. P. Van Duzee, April 19 and 20, 1921, on **San Esteban Island, Gulf of California**. *Paratypes*, 7 specimens, same data as type; 8 specimens Las Animas Bay, Gulf of California, May 8, 1921; 8 specimens, Tepoca Bay, Sonora, Mexico, April 25, 1921 (E. P. Van Duzee).

4. *Fucellia rejecta* Aldrich

Male: Differs from the female, from which sex the species was described, in having the femora usually more or less grayish in middle, and the wings faintly clouded apically.

The fifth sternite has the processes stout, rounded at apices and with sparse long bristles outwardly; the hypopygial forceps are slender, slightly curved, and a little longer than the processes of fifth sternite. Mid tibia usually with one anterodorsal and three posterodorsal bristles; hind femur with irregular bristles on anteroventral surface except basally, and some finer bristles on posteroventral surface which are longest at base and absent from beyond middle to near apex; hind

tibia with three anteroventral, four anterodorsal, and three posterodorsal bristles. Veins not thinner basally, the costal setulæ short on the entire length from humeral vein to apex of second.

Length, 6.5-7 mm.

Originally described from one female taken near San Diego, Cal. This species is represented in the collection from Tepoca Bay, Sonora, Mexico, April 25, and Las Animas Bay, Gulf of California, May 8, 1912.

About two years ago I received from W. F. Thomson three specimens of this species that were reared from larvæ found feeding on the eggs of the Grunion (*Leuresthes tenuis*), a small marine fish that deposits its eggs in a unique manner in the sand above the normal high water mark on the seashore in California. This material is referred to by Mr. Thomson in his paper on the spawning of the Grunion.*

Family LONCHÆIDÆ

5. *Lonchæa armata* Malloch, new species

Male: Black, glossy, thorax bluish, abdomen brassy; frons blue-black; lunule, face, and orbits silvery tomentose; antennæ and palpi black; legs black, basal two segments of tarsi rufous, apical three segments fuscous; wings clear, veins yellowish; calyptre yellowish white, fringes white, some of the hairs at bend fuscous; knobs of halteres black.

Eyes bare; frons fully twice as long as wide at vertex, slightly narrowed anteriorly, granulose centrally, with numerous setulose hairs; upper orbits microscopically strigose, with a few hairs behind the anterior bristle; lunule sparsely haired on sides; antennæ rather widely separated at bases, extending but little over midway to mouth, second segment with one long setulose hair which is about as long as third antennal segment, the latter narrow, not twice as long as wide; arista subnude; cheek about as high as width of third antennal segment, with three or four stout bristles above lower margin. Thoracic hairs setulose; pteropleura with two or three long setulose hairs in middle; some fine hairs surrounding base of stigmatal bristle; scutellum bare except for the four bristles. Abdomen ovate, very little tapered posteriorly, the tergites subequal in length, surface hairs not numerous nor long. Wing venation as in *polita* Say. Fringes of calyptre longer at the bend than elsewhere.

Length, 4.35 mm.

Type: Male, No. 1323, Mus. Calif. Acad. Sci., taken by E. P. Van Duzee, June 14, 1921, at Escondido Bay, Lower California.

*State of Cal. Fish and Game Comm. Fish Bull. 3, 1919, p. 9.